

What Is Claimed Is:

1 1. A shared device for connecting a computer, a
2 telephone, and a telephone receiver, comprising:

3 a voice divider, for receiving a first voice signal from
4 the computer, a second voice signal from the
5 telephone, and a third voice signal from the
6 telephone receiver, and dividing the first voice
7 signal into two first voice divided signals, the
8 second voice signal into two second voice divided
9 signals, and the third voice signal into two third
10 voice divided signals; and

11 a mixer, for receiving the voice divided signals, mixing
12 a first and a second voice divided signal then
13 transmitting the mixed signal to the telephone
14 receiver, mixing the other first and a third voice
15 divided signal then transmitting the mixed signal to
16 the telephone, and mixing the other second and the
17 other third voice divided signal then transmitting
18 the mixed signal to the computer.

1 2. The shared device according to claim 1, further
2 comprising a first amplifier, disposed between the computer and
3 the voice divider for amplifying the first voice signal before
4 sending it to the voice divider.

1 3. The shared device according to claim 2, further
2 comprising an impedance matcher, disposed between the first
3 amplifier and the computer for adjusting the volume and
4 voice-frequency of the voice signal from the computer according

5 to a differential impedance between the computer and the
6 telephone.

1 4. The shared device according to claim 3, further
2 comprising a second amplifier, disposed between the telephone
3 and the voice divider for amplifying the second voice signal
4 before sending it to the voice divider.

1 5. The shared device according to claim 1, further
2 comprising an amplifier, disposed in between the telephone and
3 the voice divider for amplifying the second voice signal before
4 sending it to the voice divider.

1 6. A shared device for connecting a computer, a
2 telephone, and a telephone receiver, comprising:
3 three voice dividers, wherein a first voice divider
4 receives a first voice signal from the computer then
5 divides it into two first voice divided signals, a
6 second voice divider receives a second voice signal
7 from the telephone then divides it into two second
8 voice divided signals, a third voice divider receives
9 a third voice signal from the telephone receiver then
10 divides it into two third voice divided signals, and
11 three mixers, wherein a first mixer receives and mixes a
12 first and a second voice divided signal then sends
13 the mixed signal to the telephone receiver, a second
14 mixer receives and mixes the other first and a third
15 voice divided signal then sends the mixed signal to
16 the telephone, and a third mixer receives and mixes
17 the other second and the other third voice divided
18 signal then sends the mixed signal to the computer.

1 7. The shared device according to claim 6, further
2 comprising a first amplifier, disposed between the computer and
3 the first voice divider for amplifying the first voice signal
4 before sending it to the first voice divider.

1 8. The shared device according to claim 7, further
2 comprising an impedance matcher, disposed between the first
3 amplifier and the computer for adjusting the volume and
4 voice-frequency of the voice signal from the computer according
5 to a differential impedance between the computer and the
6 telephone.

1 9. The shared device according to claim 8, further
2 comprising a second amplifier, disposed between the telephone
3 and the second voice divider for amplifying the second voice
4 signal before sends it to the second voice divider.

1 10. The shared device according to claim 6, further
2 comprising an amplifier, disposed between the telephone and the
3 second voice divider for amplifying the second voice signal
4 before sends it to the second voice divider.

5 11. A shared device for connecting a computer, a
6 telephone, and an internal phone exchanger, comprising:
7 a voice divider, for receiving a first voice signal from
8 the computer, a second voice signal from the
9 telephone, and a third voice signal from the internal
10 phone exchange, and dividing the first voice signal
11 into two first voice divided signals, the second
12 voice signal into two second voice divided signals,

13 and the third voice signal into two third voice
14 divided signals; and
15 a mixer, for receiving the voice divided signals, mixing
16 a first and a second voice divided signal then
17 transmitting the mixed signal to the internal phone
18 exchange, mixing the other first and a third voice
19 divided signal then transmitting the mixed signal to
20 the telephone, and mixing the other second and the
21 other third voice divided signal then transmitting
22 the mixed signal to the computer.

1 12. The shared device according to claim 11, further
2 comprising a first amplifier, disposed between the computer and
3 the voice divider for amplifying the first voice signal before
4 sends it to the voice divider.

1 13. The shared device according to claim 12, further
2 comprising an impedance matcher, disposed between the first
3 amplifier and the computer for adjusting the volume and
4 voice-frequency of the voice signals from the computer according
5 to a differential impedance between the computer and the
6 telephone.

1 14. The shared device according to claim 13, further
2 comprising a second amplifier, disposed between the internal
3 phone exchanger and the voice divider for amplifying the second
4 voice signal before sending it to the voice divider.

1 15. The shared device according to claim 11, further
2 comprising an amplifier, disposed between the telephone and the

3 voice divider for amplifying the second voice signal before
4 sending it to the voice divider.

1 16. A multiple communication system, comprising:
2 a computer, communicating with at least one remote Internet
3 client through a communication network, receiving a
4 first voice signal from the remote Internet client,
5 wherein the communication network composed of at
6 least one of the Internet, a local area network, and
7 a leased line;
8 a telephone, communicating with a remote telephone through
9 a telephone network, receiving a second voice signal
10 from the remote telephone;
11 a telephone receiver, receiving a third voice signal from
12 the telephone receiver user; and
13 a shared device, connecting the computer, the telephone,
14 and the telephone receiver, comprising a voice
15 divider and a mixer, wherein the voice divider
16 receives the first voice signal from the computer,
17 the second voice signal from the telephone, and the
18 third voice signal from the telephone receiver, and
19 divides the first voice signal into two first voice
20 divided signals, the second voice signal into two
21 second voice divided signals, and the third voice
22 signal into two third voice divided signals, and the
23 mixer receives the voice divided signals, mixes a
24 first and a second voice divided signal then sends
25 the mixed signal to the telephone receiver, mixes the
26 other first and a third voice divided signal then
27 sends the mixed signal to the telephone, and mixes

28 the other second and the other third voice divided
29 signal then sends the mixed signal to the computer.

1 17. The multiple communication system according to claim
2 16, wherein the shared device further comprising:
3 a first amplifier, disposed between the computer and the
4 voice divider for amplifying the first voice signal
5 before sending it to the voice divider;
6 a second amplifier, disposed between the telephone and the
7 voice divider for amplifying the second voice signal
8 before sending it to the voice divider; and
9 an impedance match, disposed between the first amplifier
10 and the computer for adjusting the volume and
11 voice-frequency of the voice signal from the computer
12 according to a differential impedance between the
13 computer and the telephone.

1 18. The multiple communication system according to claim
2 16, further comprising a video camera installed in the computer
3 for recording and sending the video of the telephone receiver
4 user to the remote Internet client.

1 19. A multiple communication system, comprising:
2 a computer, communicating with at least one remote Internet
3 client through a communication network, receiving a
4 first voice signal from the remote Internet client,
5 wherein the communication network composed of at
6 least one of the Internet, a local area network, and
7 a leased line;

8 a telephone, communicating with a remote telephone through
9 a telephone network, receiving a second voice signal
10 from the remote telephone;
11 a telephone receiver, receiving a third voice signal from
12 the telephone receiver user; and
13 a shared device, connected to the computer, the telephone,
14 and the telephone receiver, comprising three voice
15 dividers and three mixers, wherein a first voice
16 divider receives the first voice signal from the
17 computer then divides the first voice signal into two
18 first voice divided signals, a second voice divider
19 receives the second voice signal from the telephone
20 then divides the second voice signal into two second
21 voice divided signals, and a third voice divider
22 receives the third voice signal from the telephone
23 receiver then divides the third voice signal into two
24 third voice divided signals, and a first mixer
25 receives and mixes a first and a second voice divided
26 signal then sends the mixed signal to the telephone
27 receiver, a second mixer receives and mixes the other
28 first and a third voice divided signal then sends the
29 mixed signal to the telephone, and a third mixer
30 receives and mixes the other second and the other
31 third voice divided signals then sends the mixed
32 signal to the computer.

1 20. The multiple communication system according to claim
2 19, wherein the shared device further comprising:

3 a first amplifier, disposed between the computer and the
4 first voice divider for amplifying the first voice
5 signal before sending it to the first voice divider;
6 a second amplifier, disposed between the telephone and the
7 second voice divider for amplifying the second voice
8 signal before sending it to the second voice divider;
9 and
10 an impedance matcher, disposed between the first amplifier
11 and the computer for adjusting the volume and
12 voice-frequency of the voice signal from the computer
13 according to a differential impedance between the
14 computer and the telephone.

1 21. The multiple communication system according to claim
2 19, further comprising a video camera installed in the computer
3 for recording and sending video of the telephone receiver user
4 to the remote Internet client.

1 22. A multiple communication system, comprising:
2 a computer, communicating with at least a remote Internet
3 client through network, receiving a first voice
4 signal from the remote Internet client, wherein the
5 communication network composed of at least one of the
6 Internet, a local area network, and a leased line;
7 a telephone exchange, communicating with a remote
8 telephone through a telephone network, receiving a
9 second voice signal from the remote telephone;
10 a telephone and telephone receiver thereof, receiving a
11 third voice signal from the telephone receiver user;
12 and

13 a shared device, connecting the computer, the telephone
14 exchange, and the telephone, comprising a voice
15 divider and a mixer, wherein the voice divider
16 receives the first voice signal from the computer,
17 the second voice signal from the telephone exchange,
18 and the third voice signal from the telephone, and
19 divides the first voice signal into two first voice
20 divided signals, the second voice signal into two
21 second voice divided signals, and the third voice
22 signal into two third voice divided signals, and the
23 mixer receives the voice divided signals, mixes a
24 first and a second voice divided signal then sends
25 the mixed signal to the telephone and the telephone
26 receiver, mixes the other first and a third voice
27 divided signal then sends the mixed signal to the
28 telephone exchange, and mixes the other second and
29 the other third voice divided signals then sends the
30 mixed signal to the computer.

1 23. The multiple communication system according to claim
2 22, wherein the shared device further comprising:
3 a first amplifier, disposed between the computer and the
4 voice divider for amplifying the first voice signal
5 before sending it to the voice divider;
6 a second amplifier, disposed between the telephone
7 exchange and the voice divider for amplifying the
8 second voice signal before sending it to the voice
9 divider; and
10 an impedance matcher, disposed between the first amplifier
11 and the computer for adjusting the volume and

12 voice-frequency of the voice signal from the computer
13 according to a differential impedance between the
14 computer and the telephone.

1 24. The multiple communication system according to claim
2 23, further comprising a video camera installed in the computer
3 for recording and sending video of the telephone receiver user
4 to the remote Internet client.

1 25. A multiple communication method, comprising the step
2 of:

3 providing a computer for communication with at least a
4 remote Internet client through a communication
5 network, wherein the communication network comprises
6 at least one of an Internet connection, a local area
7 network, and a leased line;

8 providing a telephone for communicating with a remote
9 telephone used by a remote telephone user through a
10 telephone network;

11 providing a telephone receiver for being used by the
12 telephone receiver user; and

13 providing a shared device for connecting to the computer,
14 the telephone, and the telephone receiver, wherein
15 the shared device comprises a voice divider and a
16 mixer for receiving voice signals from three parties:
17 the remote Internet client, the remote telephone
18 user, and the telephone receiver user, then mixing
19 the voice signals from any two parties and
20 transmitting to the third party in order to establish
21 multiple communication connection between the remote

22 Internet client, the remote telephone, and the
23 telephone receiver user.

1 26. The multiple communication method according to claim
2 25, further comprising
3 providing a first amplifier disposed between the computer
4 and the voice divider for amplifying the first voice
5 signal before sending it to the voice divider;
6 providing a second amplifier disposed between the
7 telephone and the voice divider for amplifying the
8 second voice signal before sending it to the voice
9 divider; and
10 providing an impedance matcher disposed between the first
11 amplifier and the computer for adjusting the volume
12 and voice-frequency of the voice signal from the
13 computer according to a differential impedance
14 between the computer and the telephone.

1 27. A multiple communication method, comprising the step
2 of:
3 providing a computer for communicating with at least one
4 remote Internet client through a communication
5 network, wherein the communication network comprises
6 at least an Internet connection, a local area
7 network, and a leased line;
8 providing a telephone for communicating with a remote
9 telephone used by a remote telephone user through a
10 telephone network;
11 providing a telephone receiver for being used by the
12 telephone receiver user; and

13 providing a shared device for connecting to the computer,
14 the telephone, and the telephone receiver, wherein
15 the shared device comprises three voice dividers and
16 three mixers for receiving voice signals
17 individually from three parties: the remote Internet
18 client, the remote telephone user, and the telephone
19 receiver user, then mixing the voice signals from any
20 two parties and transmitting the mixed signal to the
21 third party in order to establish multiple
22 communication connections between the remote
23 Internet client, the remote telephone user, and the
24 telephone receiver user.

1 28. The multiple communication method according to claim
2 27, further comprising
3 providing a first amplifier disposed between the computer
4 and the first voice divider for amplifying the first
5 voice signal before sending to the voice divider;
6 providing a second amplifier disposed between the
7 telephone and the second voice divider for amplifying
8 the second voice signal before sending to the voice
9 divider; and
10 providing an impedance matcher disposed between the first
11 amplifier and the computer for adjusting the volume
12 and voice-frequency of the voice signal from the
13 computer according to a differential impedance
14 between the computer and the telephone.

1 29. A multiple communication method, comprising the step
2 of:

3 providing a computer for communication with at least one
4 remote Internet client through a communication
5 network, wherein the communication network comprises
6 at least an Internet connection, a local area
7 network, and a leased line;
8 providing a telephone exchange for communicating with a
9 remote telephone used by a remote telephone user
10 through a telephone network;
11 providing a telephone and telephone receiver thereof for
12 being used by the telephone receiver user; and
13 providing a shared device for connecting the computer, the
14 telephone exchange, and the telephone, wherein the
15 shared device comprises a voice divider and a mixer
16 for receiving voice signals from three parties: the
17 remote Internet client, the remote telephone, and the
18 telephone receiver user, then mixing the voice
19 signals from any two parties and transmitting to the
20 third party in order to establish multiple
21 communication between the remote Internet client,
22 the remote telephone user, and the telephone receiver
23 user.

1 30. The multiplecommunication method according to claim
2 29, further comprising
3 providing a first amplifier disposed between the computer
4 and the voice divider for amplifying the first voice
5 signal before sending it to the voice divider;
6 providing a second amplifier disposed between the
7 telephone and the voice divider for amplifying the

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8 second voice signal before sending it to the voice
9 divider; and
10 providing an impedance matcher disposed between the first
11 amplifier and the computer for adjusting the volume
12 and voice-frequency of the voice signal from the
13 computer according to a differential impedance
14 between the computer and the telephone.
15